

What are the barriers to eating healthily in the UK?

Scott Corfe



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This report has been commissioned by Kellogg's. The objective of the study is to explore trends in food affordability and availability across the UK, in addition to other barriers that prevent individuals eating a healthy diet.

ABOUT THE AUTHOR

Scott Corfe

Scott Corfe joined the SMF as Chief Economist in 2017. Before joining, he was Head of Macroeconomics and a Director at the economics consultancy Cebr, where he led much of the consultancy's thought leadership and public policy research. His expert insights are frequently sought after in publications including the Financial Times, the Sunday Times, the Guardian and the Daily Telegraph. Scott has appeared on BBC News, Sky News, Radio 4 and a range of other broadcast media.

Scott was voted one of the top three forecasters of UK GDP by Focus Economics in 2016.

EXECUTIVE SUMMARY

This research examines the economic barriers to healthy eating in the UK. In particular, the report focuses on three barriers to healthy eating in the UK: food affordability, food prices and access to food stores selling healthy groceries at a good price.

The key findings of the study are that:

- **Food is a key component of household budgets in the UK.** Across the country, food accounts for about one in every ten pounds spent by households. For households in the bottom income decile (the poorest 10%), food accounts for about 15% of all expenditure and takes up about a fifth of household disposable income.
- **Just under a fifth (17%) of households surveyed as part of this research said groceries put a strain on their finances.** For individuals with a household income of £10,000 or less, about two fifths (39%) said groceries were a strain on finances, as did about a quarter (23%) of those with a household income of between £10,000 and £20,000.
- **Some survey respondents stated that high and unaffordable food prices have led to a range of behavioural responses.** Across all households, two fifths (38%) said that they had started shopping in a cheaper food store, while about a quarter (23%) said that they had purchased cheaper and less healthy food – a figure that rises to a third (34%) among those with a household income of £10,000 or less.

Across all households one in ten (10%) said that they had cut back on their own level of food consumption so that others in their family (such as children) can eat. This figure stands at 14% among households with an income of less than £10,000.

- **Households in London, the East and the South of England tend to pay more for food products (on a per unit basis) than those in the North of England.** Prices paid in Scotland and Northern Ireland also tend to be higher than the average for England too. Regional variations in food prices are likely to be a reflection of store availability (such as access to premium and discounter brands) as well as household preferences such as willingness to pay more for organic and Fairtrade products.
- **Smaller convenience stores may charge a premium for some items compared with larger supermarkets.** Research by the consumer group Which? in 2017, which compared the cost of a basket of goods in different stores in London, found that smaller convenience stores were more expensive – for example, Tesco Metro was found to be 7% more expensive than Tesco and Sainsbury's Local was found to be 5% more expensive than Sainsbury's¹.

¹ <https://www.which.co.uk/news/2017/03/supermarket-convenience-stores-charge-up-to-7-more/>

- **The Opinium survey commissioned as part of this research shows a significant minority of individuals reporting that healthy and nutritious food in the UK is unaffordable.** A quarter of individuals (25%) said that they felt that healthy and nutritious food was unaffordable in the UK. For those with incomes of up to £10,000 and £10,001-£20,000 this was higher, at 44% and 27% respectively.

When asked about the types of food products they found most unaffordable, households most frequently cited fresh products, particularly fresh meat and fish – 44% and 35% of households said they found these unaffordable, respectively. Some 17% said they thought fresh fruit was most unaffordable, as did about one in ten (11%) for fresh vegetables. In contrast, just 5% of households thought snacks such as crisps and chocolate bars were most unaffordable, and just 4% thought soft drinks were.

- **Access to food may be a barrier for individuals living in “food deserts”** – areas which are poorly served by food stores. In these areas, individuals without a car or with disabilities that hinder mobility may find it difficult to easily access a wide range of healthy, affordable food products. SMF analysis presented in this report suggests that about one in ten (8% of) deprived areas in England & Wales are “food deserts”. Such areas include the Marsh Farm estate in Luton, the Southampton Way estate in South London, the Trowbridge area of Cardiff and Swarcliffe in Leeds. In Scotland, estates such as Easterhouse in Glasgow were identified as food deserts.

We estimate that 10.2 million individuals in Great Britain live in food deserts, based on our definition. 1.2 million individuals in deprived areas are estimated to be in food deserts.

According to the Opinium survey commissioned as part of this research, one in eight (12%) of individuals stated that “not being near a supermarket offering healthy food at low prices” was a barrier to being able to eat more healthily. Some 7% said not having access to a car to travel to the supermarket was a barrier to eating healthily. Although less frequently cited than other barriers – for example, 29% cited mixed messaging about healthy eating – this suggests that access to food stores is a barrier to eating well in some parts of the UK for some residents.

In total, 16% of survey respondents said either not having access to a car or not being near a supermarket offering healthy food at low prices was a barrier to eating healthy – that is, issues of access to food stores were a key concern. Segmented by age groups, we note that these are particularly barriers for older groups – a fifth (20%) of over 55s stated either of these issues as barriers to eating healthily, compare to just over one in 10 (11%) of 18-34 year olds. We also note that women are more likely than men to cite these factors as barriers to eating healthy – with 19% citing either of these compared with 13% of men. Those on the lowest incomes are more likely to cite lack of access to a car or not being near a healthy/affordable supermarket as a barrier to eating healthy – over a fifth (22%)

of those with a household income of £10,000 or less cited these factors as an issue.

- **Looking at areas which are food deserts, rural areas are overrepresented.** About three quarters (76%) of food deserts in England and Wales are in urban areas, with the remaining 24% in rural areas. Rural areas are relatively over-represented, given that they account for just 17% of all middle layer super output areas² in England and Wales. While 17% of urban areas are classified as food deserts, according to our definition, this rises to just over a quarter (26%) for rural areas.

² A “middle layer super output area” is a granular level of geography used in this analysis

1. INTRODUCTION

Poor diet has a significant impact on health outcomes, and the UK is in the midst of a health crisis linked to our bad eating habits, in addition to our lifestyles that have become increasingly sedentary in recent decades.

Data from the Office for National Statistics show that 58% of women and 68% of men are overweight or obese³. Being overweight is associated with a range of serious and potentially life-threatening health conditions such as type 2 diabetes, coronary heart disease, breast cancer and bowel cancer.

As well as eating too much, relative to our levels of physical activity, there is a pervasive problem with individuals failing to eat *nutritious* food products – not getting the recommended amount of vitamins, iron, fibre and other nutrients in their diet. Studies suggest that fewer than a third of adults are eating the recommended “five-a-day” of fruit and vegetables⁴. For children, the statistics are even more concerning, with only one in 10 eating the recommended five-a-day⁵.

Poor diet, and associated health outcomes, is likely to be a contributing factor to some of the substantial and widening health inequalities that exist in the UK. The figures here are stark: research by the Longevity Science Panel, using 2015 data, found that on average a boy born in one of the most affluent areas of the UK will outlive one born in one of the poorest by 8.4 years. This was up from 7.2 years in 2001⁶.

The drivers of poor diet are likely to be varied – ranging from lack of knowledge of what constitutes a healthy diet, to economic factors such as food affordability and availability. This means that a wide range of policy interventions may be required to get a grip on the negative health outcomes associated with poor diet.

This report aims to shed more light on some of the *economic* drivers of poor diet in the UK. In particular we focus on three areas:

- **Food affordability** – the cost of food as a proportion of individuals’ incomes
- **Food prices** – including regional variations which may lead to those in some areas of the UK paying more for food.
- **Food availability** – how easy it is for individuals to access food stores selling healthy food at a reasonable price.

With regard to the latter point, we are particularly interested in the extent to which “food deserts” may or may not be a problem in the UK. Food deserts are areas which are poorly served by supermarkets and other types of food store, making it difficult for individuals to access healthy food at a good price. Despite some degree of discussion of the notion of “food deserts” in the media and in academia, there is still relatively little work that has

3

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/613532/obes-phys-acti-diet-eng-2017-rep.pdf

⁴ <https://www.bbc.co.uk/news/health-18984025>

⁵ <https://www.bbc.co.uk/news/health-18984025>

⁶ <https://www.bbc.co.uk/news/health-43058394>

been undertaken to quantify the scale of this problem – here we analyse data in government’s Interdepartmental Business Register to shed more light on this.

This research draws on a range of other official datasets including the ONS Living Costs and Food Survey and the Defra food statistics. In addition, to support this research, we commissioned Opinium to carry out a nationally representative survey of UK households – providing further insights into trends in food affordability and availability, as well as other barriers to healthy eating in the UK. The survey was carried out online between 23rd and 25th May 2018. 2,005 adults were surveyed.

The structure of the report is as follows:

- **Chapter 2** provides an overview of trends in food affordability.
- **Chapter 3** examines variations in regional food prices.
- **Chapter 4** explores the extent to which “food deserts” exist in the UK.

2. FOOD AFFORDABILITY AND ITS IMPACT ON HEALTHY EATING

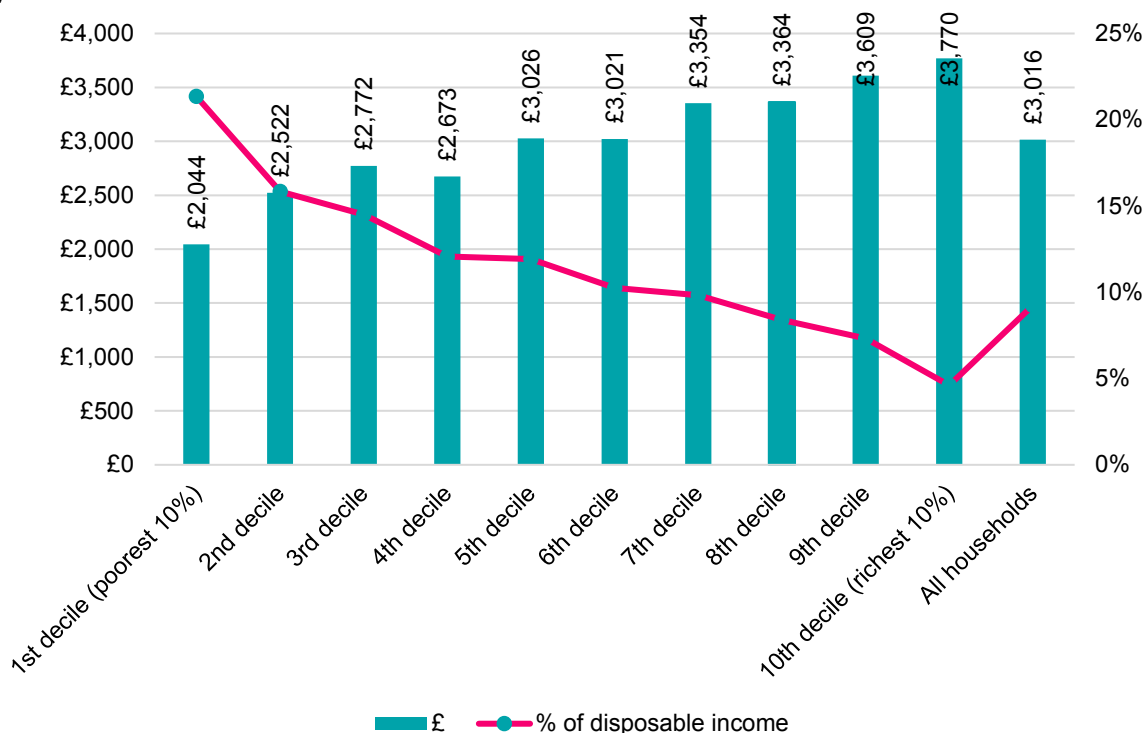
This chapter explores trends in food expenditure across the UK, establishing the financial importance of the regular grocery shop and the financial strain that it places on households.

The importance of food expenditure

Across the UK, food⁷ accounts for about one in every ten pounds spent by households. It is thus a significant part of consumer spending. Across the 12 broad consumer spending categories considered by the ONS, food is the fourth largest category of household expenditure, behind transport, housing & fuel, and recreation & culture. For the poorest 30% of households (the bottom three income deciles), food expenditure is an even more important part of the household budget; for these groups it is the second largest component of expenditure, behind housing & fuel.

For the poorest 10% of households, in terms of income, food accounts for about 15% of all expenditure and takes up about a fifth of household disposable income in this group. Variations in food prices can therefore have a big impact on living standards among low income households.

Figure 1: Annual expenditure on food and non-alcoholic beverages, £ (left-hand axis) and as a % of disposable income (right-hand axis), by equivalised disposable income decile, 2016/17 fiscal year



Source: ONS Living Costs and Food Survey, SMF analysis

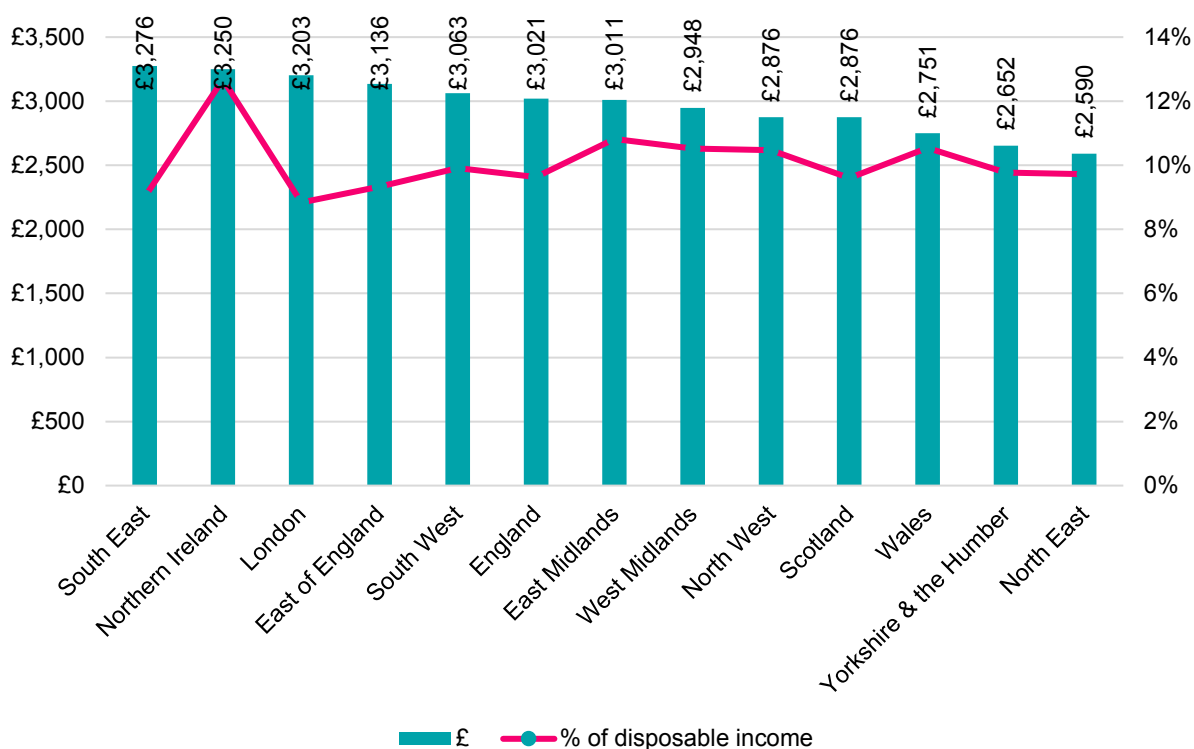
As well as variations in food expenditure by income group, there are significant variations in food expenditure by region in the UK. While the typical household in the South East

⁷ Including non-alcoholic beverages

spent on average £3,276 per year on food and non-alcoholic beverages between 2014/15 and 2016/17⁸, this was just £2,590 in the North East of England – 21% lower. Households in Northern Ireland spend the greatest proportion of their income on food and non-alcoholic beverages – 13%. Although Northern Ireland has the lowest average household income of any region of the UK, it also has the second highest average household spending on groceries. In part, this reflects slightly higher-than-average household sizes in Northern Ireland – 2.5 persons per household in Northern Ireland versus 2.4 persons across the UK as a whole. But it may also reflect the price of food and the selection of food stores available in the region – something we discuss in later chapters of this report.

Households in London spend the lowest proportion of their disposable income on food and non-alcoholic beverages, reflecting the relatively high household incomes seen in the capital.

Figure 2: Annual expenditure on food and non-alcoholic beverages, £ (left-hand axis) and as a % of disposable income (right-hand axis), by region, 2014/15–2016/17 (three year average)



Source: ONS Living Costs and Food Survey, SMF analysis

Perceptions of food affordability

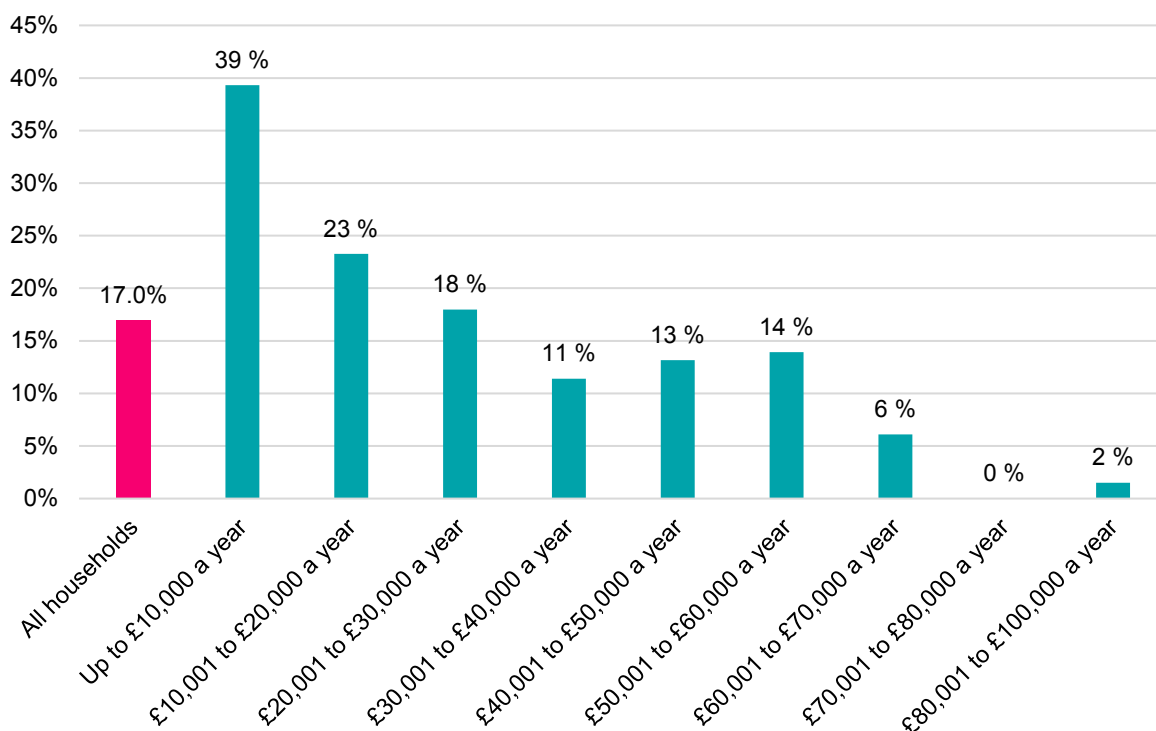
As part of this research, we commissioned Opinium to undertake a countrywide survey of households in order to better understand reported attitudes to and experiences of food affordability in the UK.

We asked households about the extent to which their regular grocery shop is financially manageable or putting a strain on their finances. While a clear majority (81%) of those

⁸ A three year average is used given the relatively small survey sample size of single year figures on a regional basis.

surveyed said they found the weekly grocery shop manageable, 17% said groceries put a strain on their finances. As expected, the extent to which groceries are a strain on finances is highest among those on lower incomes. For individuals with an annual household income of £10,000 or less, about two fifths (39%) said groceries were a strain on finances, as did about a quarter (23%) of those with a household income of between £10,001 and £20,000.

Figure 3: Thinking about the cost of your regular grocery shop, which of the following statements most applies to you? % of survey respondents describing the grocery shop as a strain on their finances, by household income group



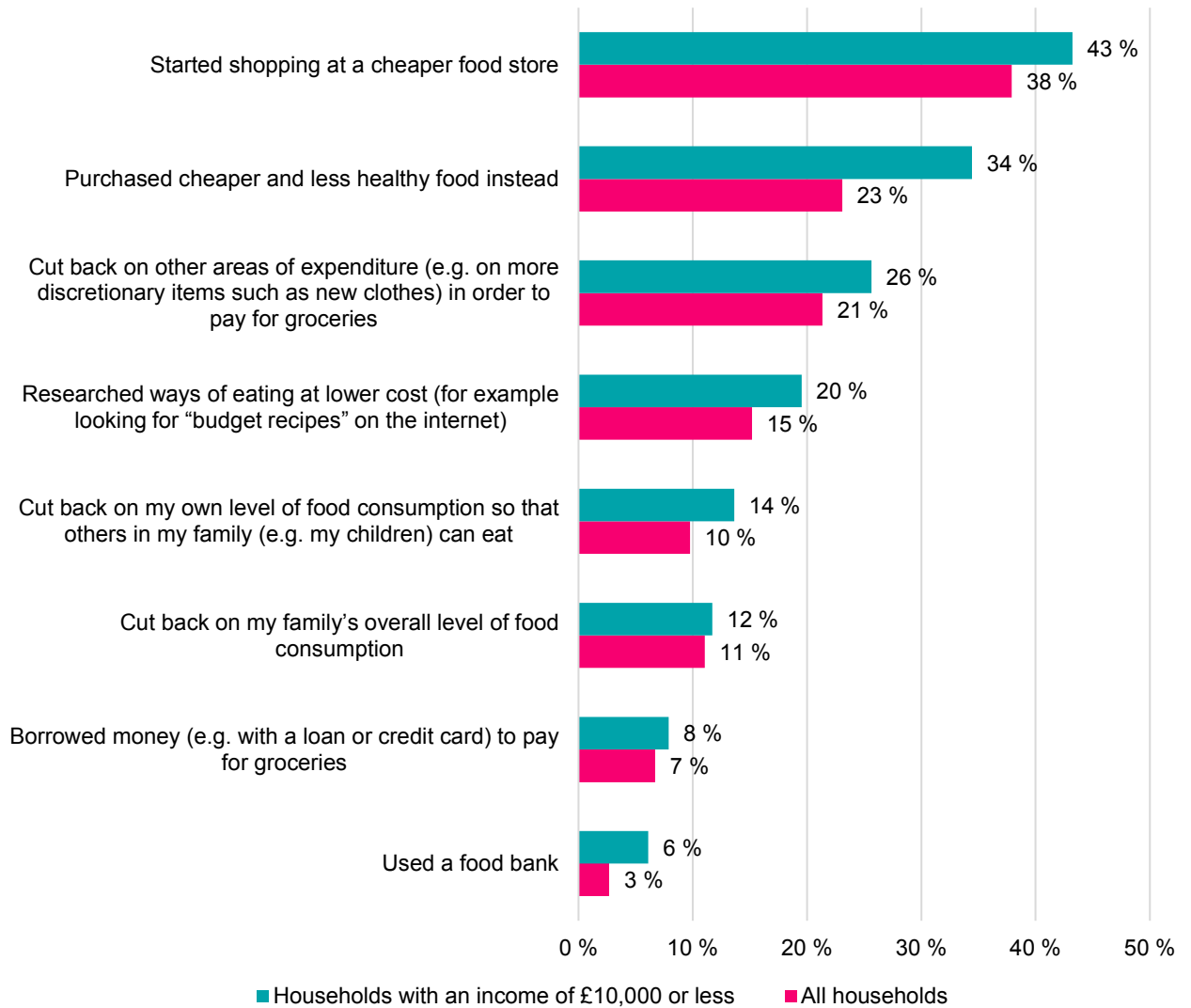
Source: Opinium

Some survey respondents stated that high and unaffordable food prices have led to a range of behavioural responses. Across all households, two fifths (38%) said that they had started shopping in a cheaper food store, while about a quarter (23%) said that they had purchased cheaper and less healthy food – a figure that rises to a third (34%) among individuals with a household income of £10,000 or less.

Across all households one in ten (10%) said that they had cut back on their own level of food consumption so that others in their family (such as children) can eat. This figure stands at 14% among individuals with a household income of less than £10,000.

The Opinium survey therefore suggests that food affordability can have a range of impacts on individuals’ eating behaviours – potentially for the worse if individuals are choosing to eat less healthily, or are malnourished due to cutting back on their own or their whole family’s levels of food consumption.

Figure 4: Have you ever done any of the following in response to high/unaffordable food prices?



Source: Opinium

3. VARIATIONS IN FOOD PRICES

As discussed in the previous chapter, food affordability is determined by household incomes; it is those in the lowest income groups that are most likely to say that the weekly grocery shop puts a strain on their finances.

However, incomes are only part of the overall story of food affordability. Another important consideration is the *prices* that individuals face in the shops and the extent to which this might vary across different parts of the country. Our analysis, presented here, suggests that there are widespread variations in the prices that individuals are paying for food products across the UK.

The drivers of variations in prices paid are likely to be numerous. The selection of food stores in a region is likely to be an important; those in areas served by relatively premium supermarkets such as Waitrose are likely to face higher overall prices than those in areas served predominantly by discount brands such as Aldi and Lidl. As well as selection of food stores, consumer *preferences* will also have a bearing on the prices individuals face; higher income individuals may be more likely to, for example, purchase more expensive brands of food product and shop in more premium stores.

Furthermore, the *size* of food store is likely to have an impact on prices charged, in addition to brand. Smaller convenience food stores, as well as newsagents, may charge a premium for some items compared with larger supermarkets. As a recent BBC article noted, some Sainsbury's stores have different prices from Sainsbury's Local convenience stores and Waitrose has different prices from Little Waitrose stores. While the biggest group of Co-op supermarkets have national pricing, there are also smaller co-operative societies that are entitled to use the brand and set their own pricing⁹. Research by the consumer group Which? in 2017, which compared the cost of a basket of goods in different stores in London, found that smaller convenience stores were more expensive. For example, Tesco Metro was found to be 7% more expensive than Tesco and Sainsbury's Local was found to be 5% more expensive than Sainsbury's¹⁰. This is likely to reflect, in part, the higher per square foot running costs associated with these smaller stores. In addition, smaller stores tend to offer a more limited range of products; cheaper brands may not be available in these outlets.

⁹ <https://www.bbc.co.uk/news/business-43979167>

¹⁰ <https://www.which.co.uk/news/2017/03/supermarket-convenience-stores-charge-up-to-7-more/>

Figure 5: The convenience store price premium in London, according to Which? analysis in 2017

Source: Which?

Regional variations in prices paid for food

As part of this research, we explored the extent to which prices paid for food vary across different regions of the UK. To provide a gauge of prices paid for food, we drew on data in the Defra Food Survey on levels of food expenditure, as well as the *volume* of food consumed by households in different regions. By dividing expenditure by consumption levels, we were able to arrive at a *per unit (gram/millilitre)* price paid for different food products, across the UK.

The analysis shows a clear trend across most food products. Per unit prices paid tend to be higher in London, the East of England and the South of England, than the rest of England. Prices paid in Scotland and Northern Ireland also tend to be higher than the average for England too. This is illustrated in the tables overleaf, which show prices paid for a range of food products, expressed as an index where prices for England as a whole are equal to 100.

One point to note here is that some of the variation in per unit prices paid may reflect differences in choice of food *quality* and food *brand*, by region. For example, in more affluent regions individuals are more likely to shop at “premium” supermarket brands such as Waitrose, and to purchase more upmarket brands within supermarkets (e.g. the “Taste the Difference” range at Sainsbury’s and “Tesco’s Finest”). Individuals may be more likely to pay a premium to purchase organic or Fairtrade products.

In Table 1 overleaf, which looks at relatively broad product categories, a significant proportion of the price variation is likely to be driven by individuals in some regions choosing relatively higher or lower priced types of cheese, fruit and vegetables, among other products

However, table 2 looks at a selected range of more specific food product categories – such as particular types of meat, milk, fruit and vegetable – and shows that even for these narrow product categories which cover relatively homogenous products (“milk is milk” and “a carrot is a carrot”), the general trend of regional price variation persists. London,

the South of England, Scotland and Northern Ireland tend to see higher prices paid for food products than the North of England and Wales. Having said that, there are some notable exceptions. We note, for example, that households in London pay less than the England average for some meat products. This might be a reflection of the wide range of meat vendors in the capital catering for London's religious and ethnic groups – for example, butchers offering halal and kosher meat. Conceivably, there may be more value meat products for sale in the capital.

Similarly, we note that Londoners pay less for rice, per kilogram, than the rest of the UK – possibly a reflection of the wide range of food stores catering for ethnic groups where rice is a much more staple food product. Price variation here may also be a reflection of London households being more likely to bulk buy rice, and in turn realise price savings from doing so.

While some of the regional price variations observed may reflect variations in consumer preferences, higher food prices may be “imposed” on some individuals living in an area. For example, an individual on a low income in a generally affluent area may find their purchases constrained by the choice of supermarkets in the area. They may wish to shop at a discount brand but not be able to if the area is dominated by more upmarket supermarkets. The discounter Aldi, for example, is relatively underrepresented in London. As we discuss in the next chapter, there may be some parts of a region that are very underserved by food stores – leaving individuals with relatively little choice in terms of where to buy groceries.

Table 1: Index of prices paid for food products (price per unit). England = 100

Description	North East	North West	Yorks. & The Humber	East Midlands	West Midlands	East	London	South East	South West	England	Wales	Scotland	Northern Ireland
Milk and milk products excluding cheese	88.1	96.3	92.3	97.4	95.8	104.2	105.6	106.9	103.6	100.0	91.2	96.6	97.1
Cheese	94.7	95.5	92.7	96.5	99.3	101.9	104.2	104.4	99.4	100.0	95.3	100.1	97.4
Carcase meat	95.1	102.9	95.4	97.7	97.4	101.1	99.5	106.1	100.7	100.0	104.9	114.9	111.3
Non-carcase meat and meat products	91.8	97.0	94.9	96.9	93.3	100.5	110.9	106.3	98.3	100.0	96.0	103.3	107.4
Fish	90.3	94.2	95.4	93.3	91.8	106.4	105.9	105.5	105.3	100.0	88.9	103.7	109.3
Eggs	96.7	94.7	92.7	92.7	91.3	103.2	107.4	108.6	98.2	100.0	94.4	102.2	94.6
Fats	93.9	95.5	93.8	99.1	93.3	100.9	107.8	104.7	103.5	100.0	104.4	108.1	99.0
Sugar and preserves	83.0	90.4	78.9	85.4	82.5	104.4	127.1	114.4	106.6	100.0	88.2	96.9	106.0
Fresh and processed vegetables, including potatoes	93.0	97.6	94.4	92.9	93.6	103.0	109.6	104.7	98.8	100.0	92.5	107.1	94.9
Fresh and processed fruit	93.1	95.5	91.8	95.7	90.1	104.5	105.2	106.3	104.1	100.0	93.8	98.9	106.8
Bread	94.0	95.5	97.7	97.1	91.2	100.4	109.5	106.9	100.2	100.0	91.4	102.4	101.7
Flour	85.5	82.2	94.8	100.6	91.7	103.9	115.3	102.0	113.1	100.0	88.4	108.7	102.9
Cakes, buns and pastries	92.0	95.7	94.5	98.2	98.1	99.4	106.5	104.9	104.2	100.0	98.0	112.4	103.1
Biscuits and crispbreads	92.6	97.6	94.4	102.3	88.2	104.9	101.0	109.9	101.9	100.0	90.8	105.0	98.4
Other cereals and cereal products	101.4	102.4	98.5	95.8	90.6	103.6	98.7	107.7	96.5	100.0	96.9	100.4	115.8
Non-alcoholic beverages	90.7	100.9	92.7	95.9	86.6	110.8	105.5	107.2	97.7	100.0	99.6	96.1	101.6

Source: SMF analysis of Defra Food Survey

Table 2: Index of prices paid for food products (price per unit). England = 100

	North East	North West	Yorks. & The Humber	East Midlands	West Midlands	East	London	South East	South West	England	Wales	Scotland	Northern Ireland
Liquid wholemilk	90.9	97.7	96.2	102.3	100.3	99.4	99.3	108.9	102.3	100.0	94.4	98.2	97.3
Skimmed milks	93.0	97.6	97.6	97.2	100.9	99.5	103.5	104.0	98.8	100.0	95.3	92.8	97.9
Minced beef	96.0	97.5	99.6	96.3	96.8	99.8	98.6	106.6	100.6	100.0	96.2	110.1	109.4
Lamb joints	97.0	109.3	93.0	102.6	107.9	107.5	90.9	100.9	119.0	100.0	115.2	124.5	141.9
Lamb chops	94.5	92.5	97.9	86.4	96.6	99.8	97.1	119.4	99.6	100.0	94.4	106.7	87.3
Pork joints	92.7	93.0	88.2	110.4	89.6	102.2	113.0	110.5	93.4	100.0	103.5	97.0	99.5
Pork chops	94.2	93.5	93.9	87.7	105.9	98.8	126.9	104.3	100.1	100.0	93.8	104.9	110.0
Pork fillets and steaks	84.7	98.8	89.7	97.6	91.7	102.5	104.7	113.6	98.4	100.0	97.9	120.5	106.1
White fish, fresh or chilled	86.7	104.3	83.4	97.0	97.4	122.6	93.6	103.9	110.1	100.0	100.3	112.6	93.9
Salmon, fresh or chilled	90.2	97.3	88.7	98.4	96.5	107.3	100.1	107.5	106.2	100.0	93.7	85.9	98.5
Salmon, tinned	103.6	94.1	93.3	101.1	102.3	107.3	97.5	102.9	100.5	100.0	111.2	130.8	109.7
Eggs	96.7	94.7	92.7	92.7	91.3	103.2	107.4	108.6	98.2	100.0	94.4	102.2	94.6
Fresh potatoes	98.0	97.7	95.4	95.7	95.6	102.0	108.3	102.6	102.0	100.0	93.6	107.2	82.3
Fresh cabbages	78.4	93.3	93.0	98.8	90.6	95.2	112.2	105.3	109.2	100.0	96.6	101.6	112.4
Fresh cauliflower	96.5	95.3	91.0	94.0	96.6	103.6	109.4	102.2	98.9	100.0	96.3	103.3	109.6
Fresh peas	86.5	115.2	67.0	73.2	101.3	125.3	101.5	117.2	105.4	100.0	39.9	112.5	84.6
Fresh carrots	88.2	95.4	91.6	94.5	93.1	104.3	113.9	102.8	99.7	100.0	94.1	103.3	112.8
Fresh tomatoes	96.1	97.2	95.8	95.1	97.5	105.2	101.2	105.0	98.3	100.0	97.9	100.1	104.2
Fresh oranges	101.1	95.4	96.8	97.9	96.6	101.6	103.2	105.5	97.3	100.0	99.2	98.0	123.6
Fresh apples	100.0	102.8	105.2	95.9	93.4	107.7	104.4	93.7	100.6	100.0	94.7	113.0	113.5
Fresh bananas	99.0	98.8	98.6	97.4	98.9	99.9	104.3	99.2	103.6	100.0	98.8	104.2	111.1
Rice	128.8	114.6	108.3	104.7	85.7	119.0	72.5	118.9	120.4	100.0	132.7	106.0	134.9
Pasta	91.6	103.3	92.6	89.9	90.0	96.1	111.1	104.0	100.7	100.0	97.2	110.5	110.3

Source: SMF analysis of Defra Food Survey

The cost of eating healthily

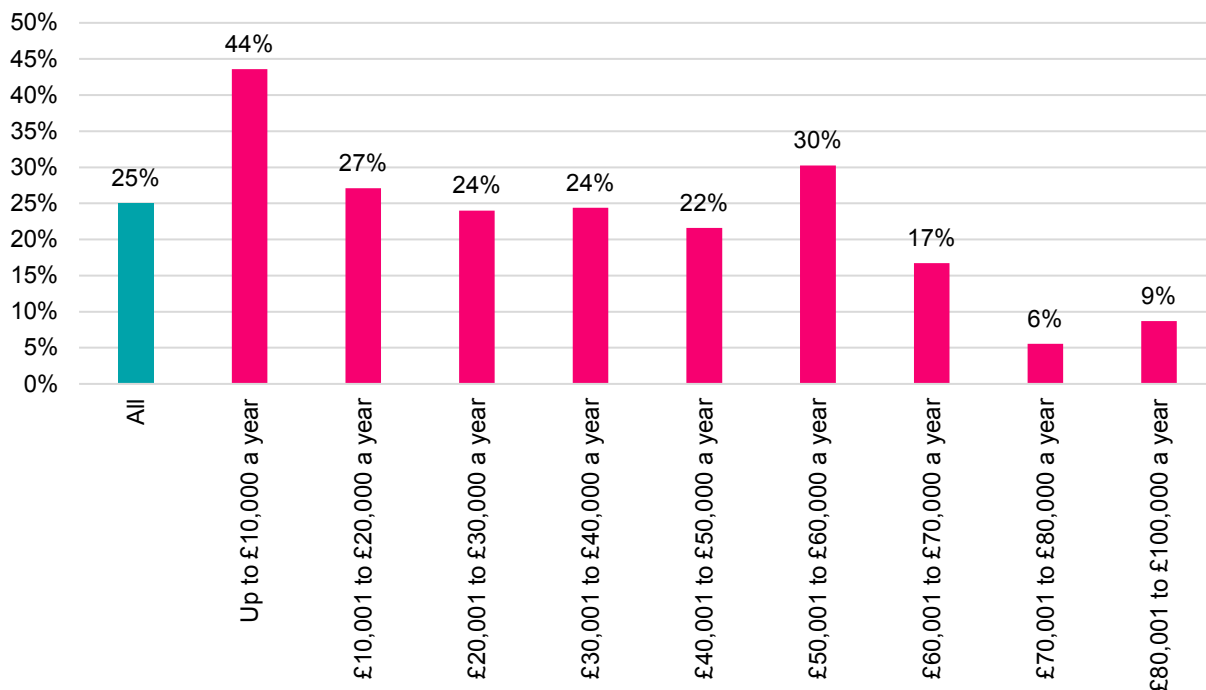
One particular concern, as far as prices are concerned, is the relative price of “healthy” food products versus “unhealthy” products. Some academic research suggests that healthy food may be more expensive, on a per calorie basis, than less healthy food. This price differential may exacerbate health inequalities between richer and poorer households; as we showed in the previous Chapter those on low incomes are more likely to switch to cheaper and more unhealthy food products when confronted with high prices.

A study by the University of Cambridge tracked the price of 94 key food and beverage products between 2002 and 2012 and found that healthy foods were consistently more expensive than less healthy foods. In 2002, 1,000 kcal of more healthy foods – as defined by criteria devised for the UK government – cost an average of £5.65, compared to purchasing the same quantity of energy from less healthy food at £1.77. By 2012 this cost had changed to £7.49 for more healthy and £2.50 for less healthy foods. The study found, therefore, that healthy food products, such as fresh fruit, meat and vegetables, cost about three times more per calorie than less healthy products¹¹.

The Opinion survey commissioned as part of this research shows a significant minority of individuals reporting that healthy and nutritious food in the UK is unaffordable. A quarter of individuals (25%) said that they felt that healthy and nutritious food was unaffordable in the UK. For those with incomes of up to £10,000 and between £10,001 and £20,000 this was higher, at 44% and 27% respectively. By region, the proportion of individuals saying healthy and nutritious food is difficult to afford stood highest in Northern Ireland (34%) and the South West (31%), and lowest in the North East (17%).

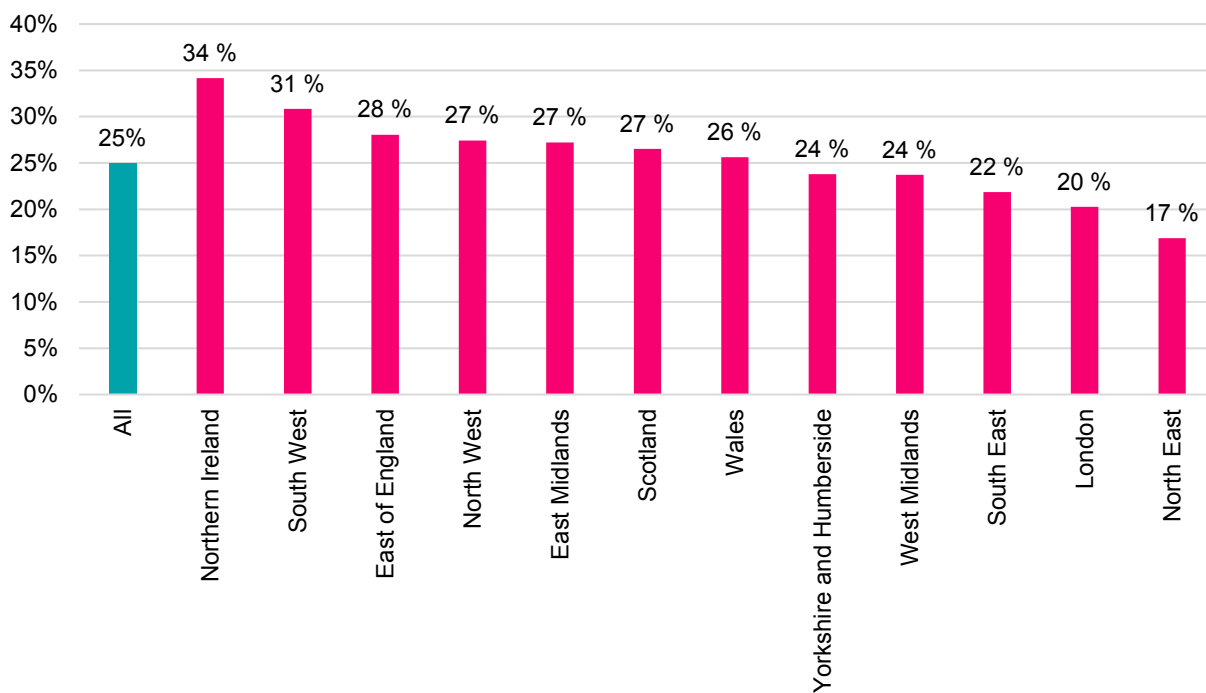
¹¹<http://www.cam.ac.uk/research/news/price-gap-between-more-and-less-healthy-foods-grows>

Figure 6: How easy or difficult do you think healthy and nutritious food is to afford in the UK? For example, fresh fruits, fresh vegetables and fresh meat products. % saying healthy food is difficult to afford, by household income



Source: Opinium

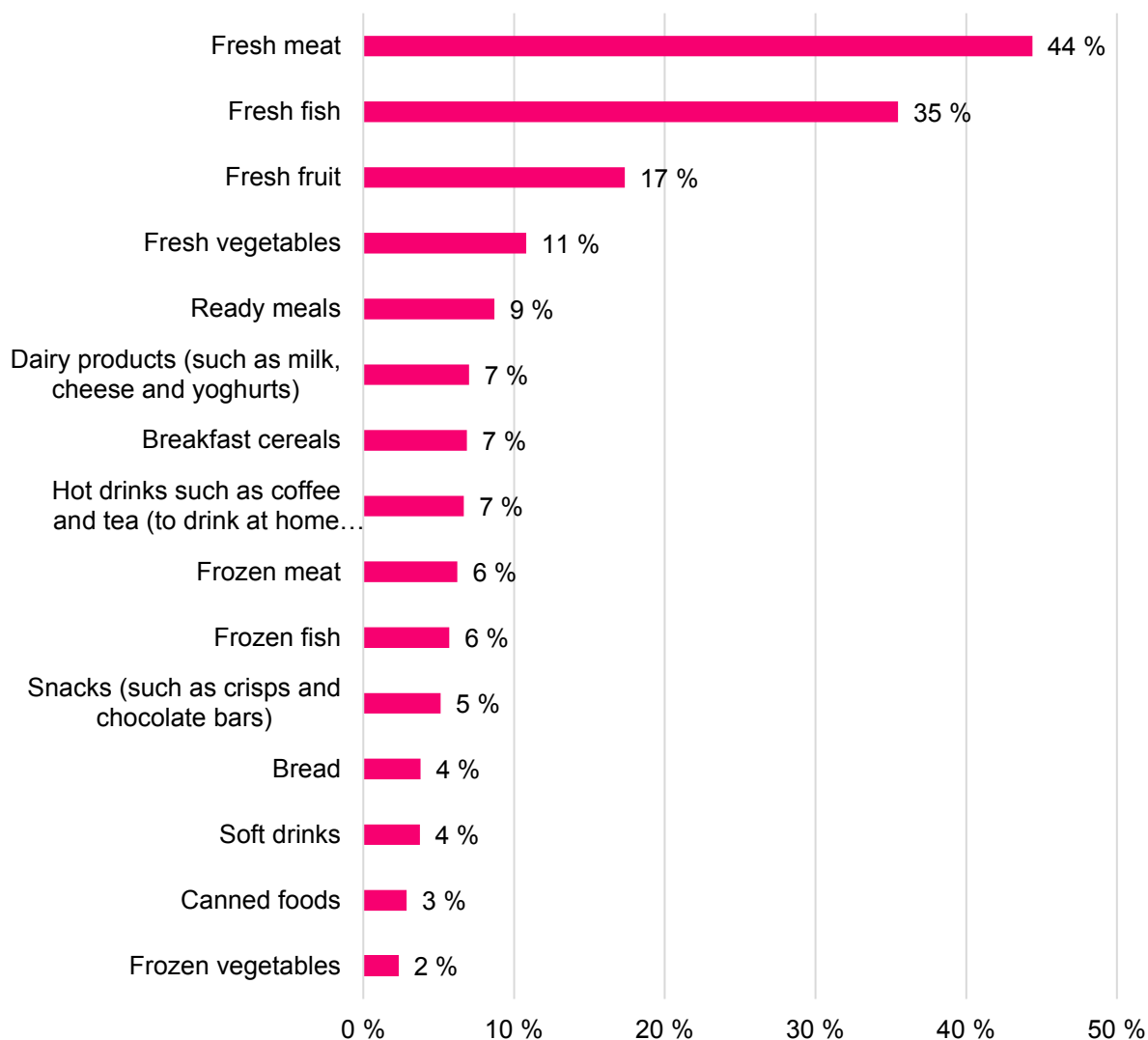
Figure 7: How easy or difficult do you think healthy and nutritious food is to afford in the UK? For example, fresh fruits, fresh vegetables and fresh meat products. % saying healthy food is difficult to afford, by region



Source: Opinium

When asked about the types of food products they found most unaffordable, households most frequently cited fresh products, particularly fresh meat and fish - 44% and 35% of households said they found these unaffordable, respectively. Some 17% said they thought fresh fruit was most unaffordable, as did about one in ten (11%) for fresh vegetables. In contrast, just 5% of households thought snacks such as crisps and chocolate bars were most unaffordable, and just 4% thought soft drinks were. As with the University of Cambridge research, this suggests that the lower price of some unhealthy food products, relative to healthier products, may be a contributing factor to poor diets.

Figure 8: Which, if any, of the following food products do you find most unaffordable? Please select a maximum of three options



Source: Opinium

4. FOOD DESERTS AND FOOD OASES – VARIATIONS IN FOOD AVAILABILITY

In the previous chapter of the report, we highlighted the fact that choice of food store in an area is likely to have a bearing on the prices that individuals pay for food. Those living in areas dominated by relatively premium supermarkets, or in areas dominated by small convenience stores, are likely to face higher prices for a range of grocery products.

One particular type of food availability concern, which we focus on in this Chapter, is “food deserts” – areas which are poorly served by food stores, particularly those selling fresh, healthy products. In these areas, where food choice is more limited than elsewhere, it may be particularly hard for households to buy healthy food conveniently, at a reasonable price. Food deserts may be especially problematic for those on low incomes, or relatively vulnerable individuals such as those with a disability which limits their ability to travel. Not having access to a car in a food desert can limit an individual’s ability to reach food stores offering a good selection of products at a good price. Dr Hillary Shaw, an expert on food deserts, has suggested that individuals should not have to walk any more than 500 metres to a shop that sells healthy foods¹². His past research, which covered several areas of the UK, showed about 20% of rural areas and 25% of urban areas requiring individuals having to walk more than 500 metres to reach a shop selling a good amount of fruit and vegetables¹³.

Discussion of food deserts in the UK was particularly prominent in the 1990s, amid a wider discussion about poverty and deprivation in Britain. This discussion was concentrated on relatively economically deprived areas such as social housing estates, with many hypothesising that supermarkets might underserve such areas – given the lower profits that could be realised from basing a store in an area where residents’ incomes are relatively low.

“Food deserts, the Minister of Public Health was told . . . are those areas of cities where cheap, nutritious food is virtually unobtainable. Car-less residents, unable to reach out-of-town supermarkets, depend on the corner shop where prices are high, products are processed and fresh fruit and vegetables are poor or non-existent”

-The Independent, 11 June 1997

Despite much discussion of food deserts, in the media and among academics, there have been limited efforts to systematically quantify the scale of the problem in the UK. Indeed, some have pointed to the fact that the widespread existence of “food deserts” in the UK has often been asserted and assumed, rather than based on detailed analysis¹⁴.

Academic studies have tended to adopt a “case study” approach, examining access to food in a specific town, city or rural area in the UK. Some academics and businesses have suggested that food deserts are unlikely to be a major issue in the UK, given the

¹²<https://www.harper-adams.ac.uk/news/2816/britains-towns--village-are-becoming-food-deserts>

¹³<https://www.independent.co.uk/news/uk/home-news/food-deserts-depriving-towns-of-fresh-fruit-and-vegetables-764804.html>

¹⁴ For a discussion of this see Wrigley, Warm and Margetts (2002), “Deprivation, Diet and Food Retail Access: Findings from the Leeds ‘Food Deserts’ Study”

competitive nature of the food retail sector and wide range of stores across the country¹⁵. Arguably the rise of online grocery deliveries will limit the extent to which food deserts are a significant problem, although it is unclear whether online deliveries will be used equally across society – something we discuss later in this report.

How widespread are food deserts?

Part of the challenge with understanding the pervasiveness of food deserts in the UK is the lack of data on this issue. The extent to which an area is a “food desert” arguably depends on a wide range of factors such as the characteristics of individuals living in an area (incomes, access to a car, use of online groceries and disability status) and access to public transport, in addition to the number of food stores within a given radius. Furthermore, depending on definition, the “type” of food store may matter – arguably an area with many small food stores offering a limited range of products at relatively high prices is still a “food desert”. Getting a solid understanding of these factors requires detailed local-level analysis and understanding, which has limited the scale of analysis undertaken.

However, there are datasets that we can look at, which are likely to give a reasonable gauge of the extent to which an area is *likely* to be a food desert, which we consider here. In particular, the government’s Interdepartmental Business Register (IDBR) contains detailed information on the number and type of businesses within a particular area of the UK. This data are available at quite a granular level of geography; for England & Wales it is available for “middle layer super output areas” (MSOAs), which each contain about 5,000-15,000 individuals – 7,201 areas in total. For Scotland, the data are available for “intermediate zones” which each contain 2,500-6,000 people – 1,279 areas in total. Unfortunately, comparable data are not available for Northern Ireland. The IDBR covers 2.6 million businesses in all sectors of the UK economy, other than very small businesses (those without employees and with turnover below the tax threshold) and some non-profit making organisations.

Using IDBR data for 2017, we have been able to understand and map the distribution of supermarkets and convenience stores across Great Britain¹⁶, across geographical areas containing a similar size of population – we are thus able to gauge the “supermarket density” of an area. While we are not able to gauge the micro-level characteristics of local geographies with this dataset – such as the specific nature of the supermarkets/convenience stores in an area, it does allow us to get a feel for the likely national extent of the problem of food deserts in the UK. This is in contrast to past studies, which have tended to provide a detailed assessment of the problem of food deserts in a specific area, without consideration of the extent to which food deserts are or are not a pervasive issue in the UK as a whole. The national pervasiveness of food deserts is an important issue as far as policymaking is concerned, given that it determines whether food deserts are best tackled through national or local initiatives (or some combination of the two).

¹⁵See, for example,

<https://publications.parliament.uk/pa/cm201415/cmselect/cmenvfru/703/703.pdf>

¹⁶ We examine stores classified in the “47110” industry (SIC) classification: “retail sale in non-specialised stores with food, beverages or tobacco predominating”

For the purpose of this analysis we use the following definitions:

- **Food desert** – an area containing two or fewer supermarkets/convenience stores.
- **Deprived food desert** – a food desert which is in the most deprived 25% of areas, according to the Index of Multiple Deprivation measures produced by government in England, Wales and Scotland.
- **“Normal” area** – an area containing between three and seven supermarkets/convenience stores (the modal range of such stores in Great Britain, across the geographies examined).
- **Food oasis** – an area containing more than seven supermarkets/convenience stores.

These definitions are partially determined by the fact that publicly available data from the IDBR are rounded to the nearest five, for non-disclosure reasons. Thus an area recording “0” supermarkets or convenience stores in the dataset could in fact contain one or two such stores. Nevertheless, one could still consider such areas “food deserts” given that choice of food stores is more constrained than in other parts of the country.

Based on these definitions, just under a fifth (18%) of middle layer super output areas in England & Wales are food deserts. For Scotland’s “intermediate zones”, just over two fifths (42%) of areas are food deserts. We stress that these two figures are not directly comparable, given that “intermediate zones” are more granular than “middle layer super output areas” – given their smaller size an individual area is more likely to be a food desert. Given that intermediate zones contain about half as many individuals as super output areas, and assuming some degree of proportionality, it is likely that the prevalence of food deserts in Scotland is of a similar magnitude to England & Wales, on a like-for-like basis, with about one in five areas being food deserts.

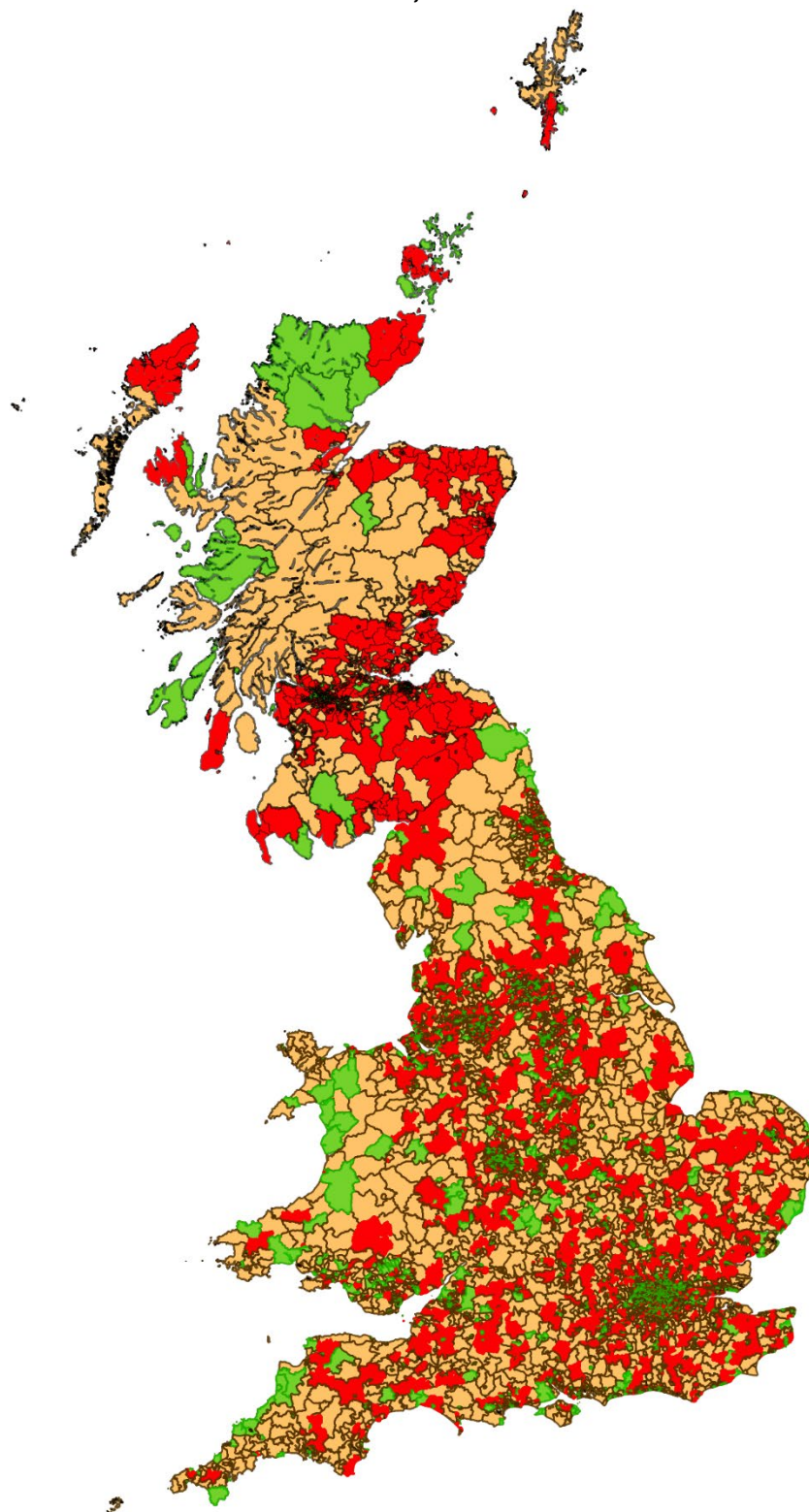
We estimate that 10.2 million individuals in Great Britain live in food deserts, based on our definition – some 16% of the total population¹⁷.

Figure 9 presents a map of Britain’s food deserts and oases, on our definition. Deserts are coloured red while oases are coloured green. Normal areas are shaded yellow. Figure 10 presents a map of *deprived* deserts in Great Britain – places that are economically disadvantaged as well as having a low density of supermarkets and convenience stores. These are indicated by red dots on the map. We estimate that 1.2 million individuals in deprived areas in Great Britain live in food deserts¹⁸.

¹⁷ Estimate based on a scaled “like-for-like” comparison for Scotland, given that intermediate zones on average contain fewer individuals than super output areas.

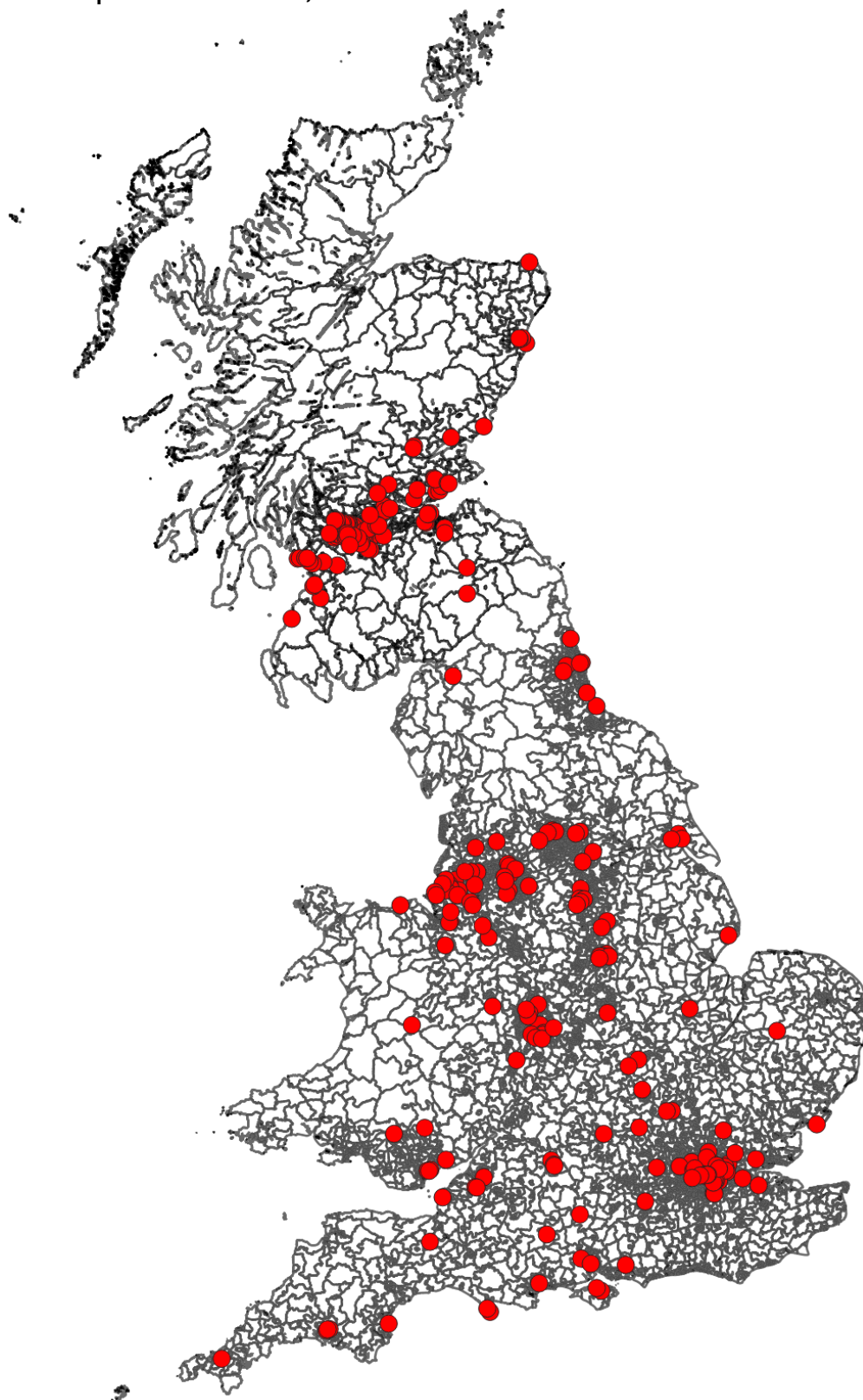
¹⁸ Estimate based on a scaled “like-for-like” comparison for Scotland, given that intermediate zones contain fewer individuals than super output areas.

Figure 9: Food deserts and food oases, 2017



Source: SMF analysis of IDBR data

Figure 10: Deprived food deserts, 2017



Source: SMF analysis of IDBR data

Food deserts, on our definition, are spread out across the UK, and cover both rural and urban areas. As “super output areas” are constructed in such a way that they contain a similar number of people in each area, some individuals living in rural food deserts are potentially further away from supermarkets than those living in an urban food desert (as these areas are geographically larger in size) . However, these rural areas are also, generally, much less likely to suffer from economic and social deprivation compared with urban areas; higher levels of car ownership may lessen the impacts of being geographically distant from a supermarket¹⁹.

We note a cluster of *deprived* food deserts in the South and North of Wales, in London, in the North West and in the North East of England. In Scotland, there are a cluster of deprived food deserts in Edinburgh and Glasgow, covering housing estates such as Easterhouse.

Across England and Wales, about one in ten (8%) deprived middle layer super output areas are food deserts. While this is lower than the 18% seen across England & Wales as a whole, factors such as lower levels of car ownership and higher levels of disability may mean that access to food is particularly problematic for residents in these areas.

Some of the deprived food deserts identified in our research have been discussed and research elsewhere. One example is the Trowbridge area of Cardiff. A study by Professor Cliff Guy of the University of Cardiff in 2004 noted that food accessibility had worsened in some parts of Cardiff in recent decades. In particular, Professor Guy’s analysis suggested that while access to food had improved across Cardiff as a whole since the 1980s, it had worsened in deprived areas over the previous decade – leading to a widening gap in access to food shopping facilities across the city²⁰.

Similarly, the issue of food deserts in Leeds has been discussed in research; like our analysis they identify estates such as Swarcliffe as being poorly served by food stores²¹.

While London as a whole contains many “food oases”, where individuals have access to a wide range of shops, there are several pockets of deprivation in the capital which are poorly served by food stores. One such area is the Southampton Way estate in South London – which is poorly served by big name supermarkets.

A number of social housing estates located outside of city and town centres are particularly poorly served by supermarkets. The location of these estates means that those without access to a car are likely to find it difficult to access a wide selection of food shops. One example of such an estate is Marsh Farm in Luton. While the estate contains a number of convenience stores, such as a couple of “Nisa Local” shops, access to large discount stores is not particularly convenient for those without a car. Reaching the nearest Aldi store, for example, is a circa 25 minute walk from some parts of the estate, or 20 minutes by bus (excluding any waiting times for said bus)²².

¹⁹ Indeed, some researchers in this area use different definitions of “food desert” for rural and urban areas. The London School of Economics study [here](#), on the United States, defined an urban food desert as one more than one mile from a supermarket, and a rural food desert as one more than 10 miles from a supermarket.

²⁰ <https://www.emeraldinsight.com/doi/abs/10.1108/09590550410521752>

²¹ https://www.researchgate.net/profile/Neil_Wrigley/publication/248973766_Life_in_a_%27Food_Desert%27/links/573b21cf08ae9ace840e9e12/Life-in-a-Food-Desert.pdf

²² Travel times estimated using Google Maps

Figure 11: Marsh Farm in Luton



The tables below show the top 10 most deprived food deserts (as measured by the Index of Multiple Deprivation) in England, Wales and Scotland. We provide a separate table for each country as data on deprivation are not comparable across countries, limiting the ability to provide a Britain-wide “top 10”. For super output areas in England & Wales, we provide a brief description of the geographies covered by the area, given that their official names are not intuitive.

Figure 12: Ten most deprived food deserts in England

	Super output area	Description/key areas
1st (most deprived)	Kingston upon Hull 017	Some areas in the Marfleet electoral ward
2nd most deprived	Bristol 053	Parts of the Hartcliffe area of Bristol
3rd most deprived	Tameside 027	Hattersley
4th most deprived	Sefton 034	Parts of Seaforth
5th most deprived	Bristol 051	Withywood area of Bristol
6th most deprived	Liverpool 011	Parts of Norris Green
7th most deprived	Birmingham 082	Sparkhill, Birmingham
8th most deprived	Halton 010	Castlefields
9th most deprived	Liverpool 023	Everton Park area
10th most deprived	Knowsley 001	Parts of Northwood, Kirkby

Source: SMF analysis of IDBR data

Figure 13: Ten most deprived food deserts in Wales

	Super output area	Description/key areas
1st (most deprived)	Cardiff 013	Parts of Saint Mellons, Cardiff
2nd most deprived	Cardiff 016	Parts of Trowbridge, Cardiff
3rd most deprived	Newport 010	Ringland
4th most deprived	Wrexham 010	Parts of Caia Park, Wrexham
5th most deprived	Denbighshire 006	Parts of Rhyl
6th most deprived	Powys 009	Maesyrrhandir, Newtown
7th most deprived	Rhondda Cynon Taf 001	Hirwaun, Penderyn, Rhigos
8th most deprived	Cardiff 015	Parts of Rumney, Cardiff
9th most deprived	Blaenau Gwent 002	Brynmawr
10th most deprived	Caerphilly 008	Gelligaer

Source: SMF analysis of IDBR data

Figure 14: Ten most deprived food deserts in Scotland

	Intermediate zone
1st (most deprived)	Dalmarnock
2nd most deprived	Central Easterhouse
3rd most deprived	Wyndford
4th most deprived	Drumchapel North
5th most deprived	Crookston South
6th most deprived	Methil West
7th most deprived	Drumchapel South
8th most deprived	Craigend and Ruchazie
9th most deprived	Glenwood South
10th most deprived	Granton South and Wardieburn

Source: SMF analysis of IDBR data

As the table below shows, by region, the East of England has the greatest proportion of MSOAs in England & Wales²³ that are food deserts – at 23.4%. London has the lowest proportion, with just 10.0% of areas being food deserts. If we just look at *deprived* food deserts, the South West has the greatest proportion of deprived MSOAs that are food deserts – with 16.9% of deprived areas being deserts. The North East and West Midlands have the joint lowest proportion of deprived areas being food deserts (5.4%).

Figure 15: Food deserts by region of England & Wales

	Number of MSOAs	Number of deprived MSOAs	Number of food deserts	Number of deprived food deserts
North East	340	130	47	7
North West	924	330	193	34
Yorkshire and The Humber	692	230	125	16
East Midlands	573	138	100	11
West Midlands	735	240	132	13
East of England	736	86	172	7
London	983	347	98	28
South East	1,108	108	245	12
South West	700	89	144	15
Wales	410	103	53	9
TOTAL	7,201	1,801	1,309	152

	% of all MSOAs that are food deserts	% of deprived MSOAs that are food deserts	Number living in food deserts	Number living in deprived food deserts
North East	13.8%	5.4%	309,729	47,394
North West	20.9%	10.3%	1,336,264	237,562
Yorkshire and The Humber	18.1%	7.0%	880,902	115,181
East Midlands	17.5%	8.0%	748,610	80,633
West Midlands	18.0%	5.4%	908,662	91,876
East of England	23.4%	8.1%	1,246,899	59,462
London	10.0%	8.1%	762,963	224,751
South East	22.1%	11.1%	1,798,850	90,215
South West	20.6%	16.9%	1,012,479	102,208
Wales	12.9%	8.7%	343,773	57,019
TOTAL	18.2%	8.4%	9,349,131	1,106,301

Source: SMF analysis of IDBR data

²³ Scotland excluded from analysis here due to the incomparability of intermediate zones and MSOAs.

We stress that food deserts are very much a “local-level” problem rather than a nationwide or even town/city-wide problem. For example, Hartlepool in the North East of England contains a range of supermarkets including a Sainsbury’s, a Lidl, an Iceland, a Morrison’s, an Asda and a Tesco Extra. However, the “Hartlepool 009” super output area, covering the southwest of the town (the “Rift House” area) is a deprived food desert which is not well-located for the supermarkets in the town. Walking to the nearest Tesco Extra, for example is a circa 30 minute walk or 20 minutes by bus (excluding waiting times). We note that local media has highlighted the lack of food stores in the southwest of Hartlepool²⁴.

The localised nature of the issue of food deserts supports the case for local-level, rather than nationwide, policy interventions to tackle the problem. These could include improving public transport in an area to make it easier for individuals to access food shops, food clubs such as school breakfast clubs and measures to improve the local level retail offer.

Rural and urban food deserts

About three quarters (76%) of food deserts in England and Wales²⁵ are in urban areas, with the remaining 24% in rural areas. Rural areas are relatively over-represented, given that they account for just 17% of all middle layer super output areas in England and Wales.

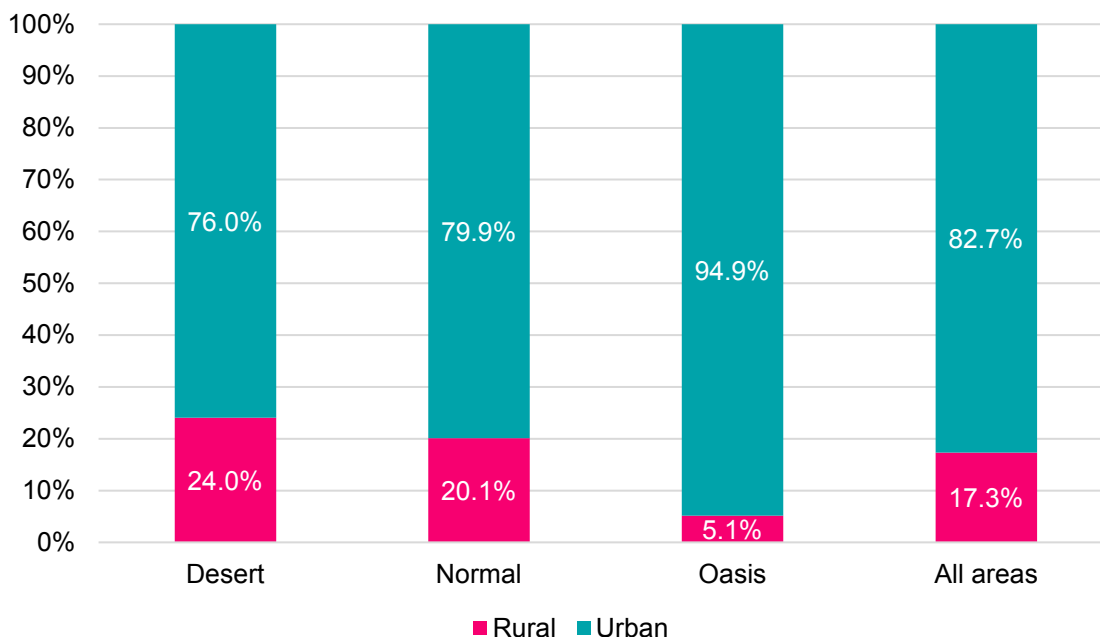
While 17% of urban areas are classified as food deserts, according to our definition, this rises to just over a quarter (26%) for rural areas. Furthermore, while about a quarter (24%) of urban super output areas are “food oases”, this is the case for just 7% of rural super output areas. Indeed, 95% of all food oases in England & Wales are in urban areas, with just 5% in rural areas.

Rural areas are thus more likely to have more restricted choice of food stores than urban areas. At the same time, rural areas generally have lower levels of economic and social deprivation than urban areas, and car ownership rates tend to be higher – making it easier for individuals to travel greater distances to food stores. Having said that, those without access to a car, or with restricted mobility (for example due to age or disability) may encounter difficulties accessing a range of food stores in a rural area.

²⁴ <https://www.hartlepoolmail.co.uk/news/store-plans-for-pub-site-1-5052039>

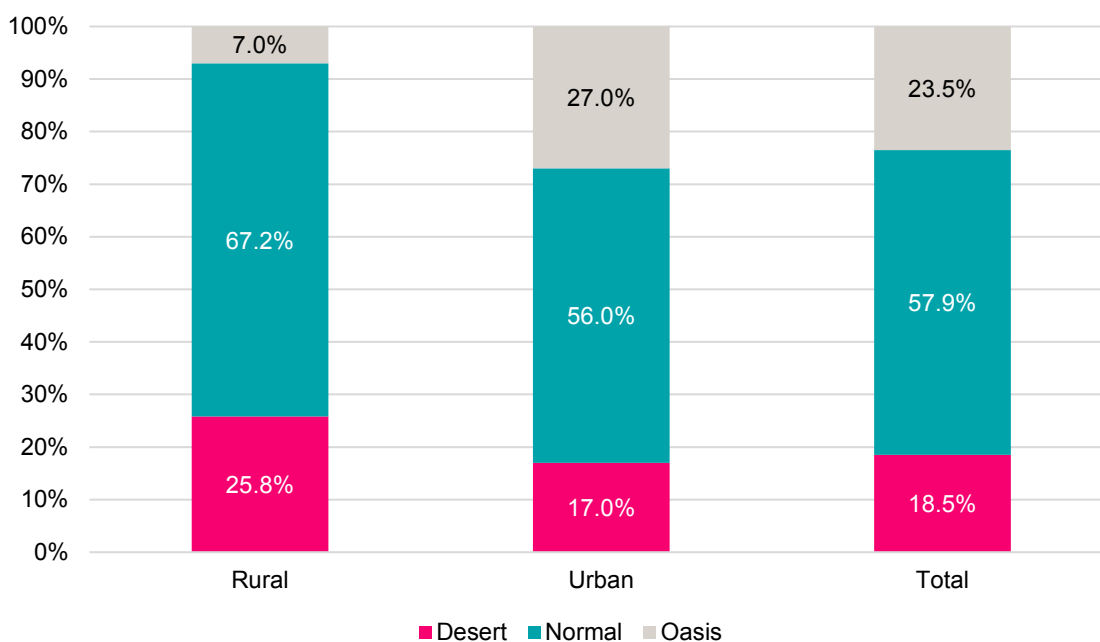
²⁵ Directly comparable data for Scotland are unavailable

Figure 16: Food deserts and food oases, by rural-urban classification, England & Wales, 2017



Source: ONS, SMF analysis

Figure 17: Distribution of food store density, by rural-urban classification, England & Wales, 2017



Source: ONS, SMF analysis

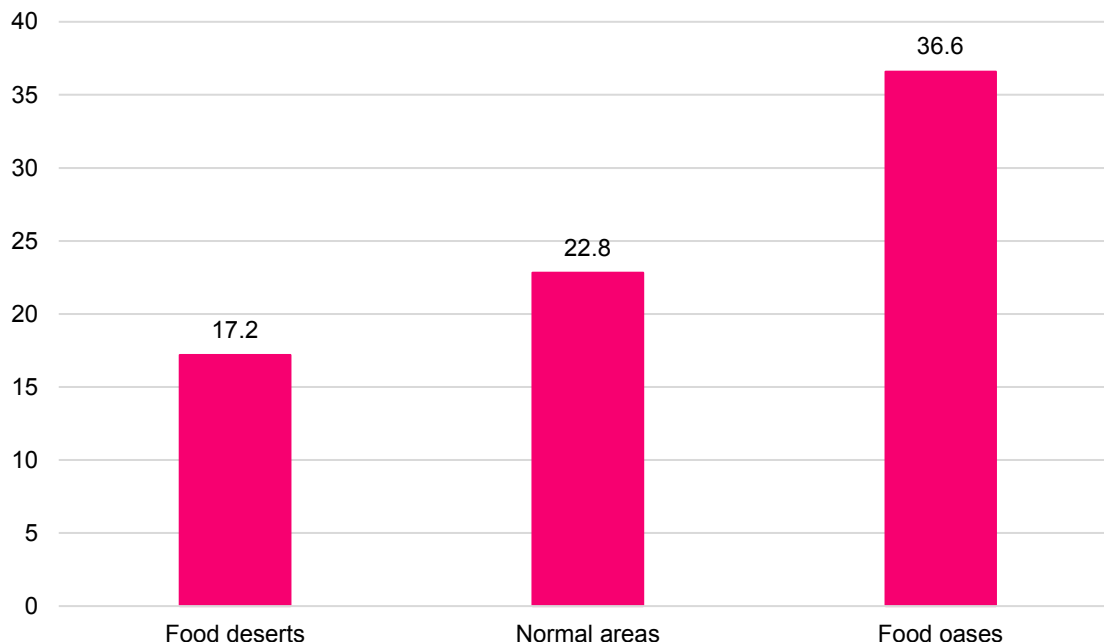
Car ownership in food deserts

Access to a car can make it easier for individuals to reach a greater selection of food stores – possibly offering a wider range of food products at better prices than within walking distance. Car ownership can be particularly beneficial for those living in food deserts, where choice of food store is relatively limited.

ONS data for England and Wales suggest that car ownership rates tend to be higher in food deserts than in food oases – likely to reflect in part a relative lack of nearby amenities.

On average 83% of households in food deserts have access to a car or van, compared with 63% living in food oases. However, this still leaves an average of 17% of households in food deserts without access to a car or van – potentially limiting their ability to access a wide range of food stores.

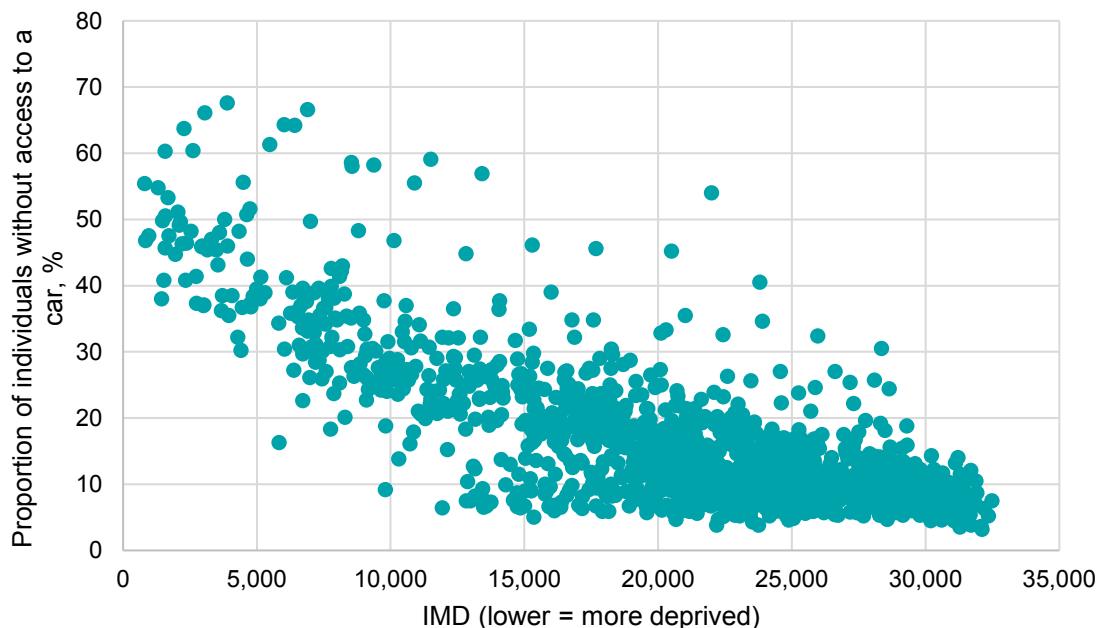
Figure 18: Mean proportion of households without access to a car or van, %, England & Wales



Source: ONS Census 2011 data on car ownership, IDBR data for 2017, SMF analysis

Furthermore, car ownership rates vary significantly in food deserts, with many areas (particularly deprived areas) with a notably higher-than-average proportion of households without access to a car. In Marsh Farm in Luton (the “Luton 003” super output area), for example, just over a third (36%) of individuals have no access to a car or van. The link between deprivation and lower rates of car ownership means that the negative impacts of living in a food desert are likely to be greater in deprived areas, in terms of having limited convenient access to food stores.

Figure 19: Proportion of individuals without access to a car and index of multiple deprivation (IMD), food deserts in England (Scotland and Wales are not included in the chart as their IMD data are not directly comparable to England's)

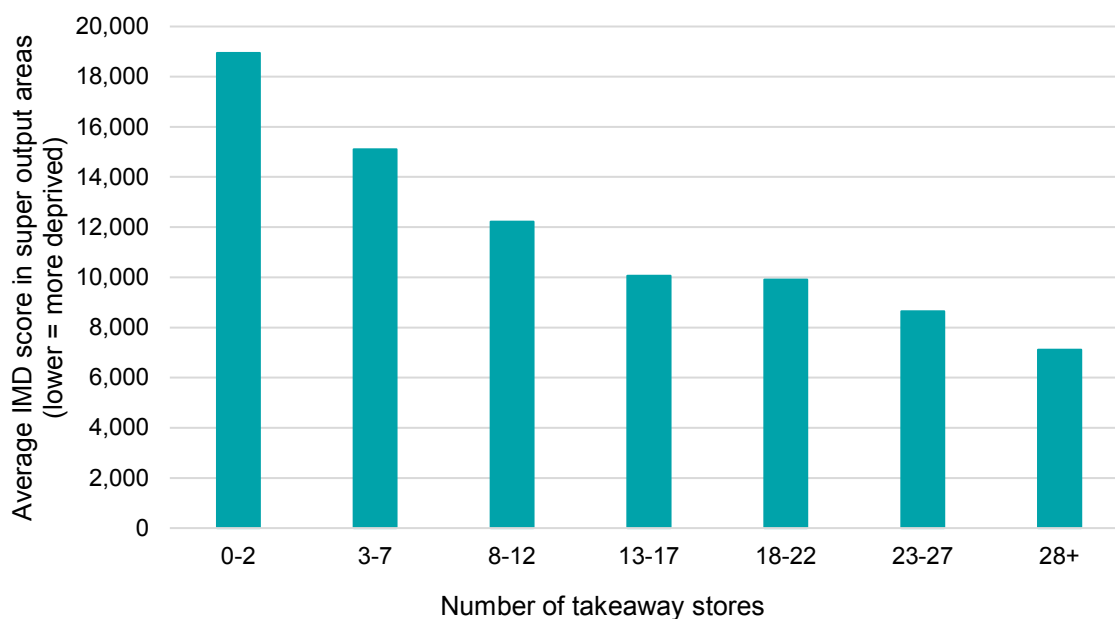


Source: ONS Census 2011, IMD data for 2015, SMF analysis

The temptation of the takeaway

On average, there are more takeaway stores in deprived areas. This is illustrated in the graph below, which showed the average index of multiple deprivation (IMD) score for super output areas with a given number of takeaway stores (as measured in the IDBR). Note that a lower IMD implies a *higher* level of deprivation.

Figure 20: Number of takeaway stores and average index of multiple deprivation (IMD) score for middle layer super output areas in England. (Scotland and Wales are not included in the chart as their IMD data are not directly comparable to England's)



Source: IDBR data for 2017, IMD data for 2015, SMF analysis

The link between takeaway availability and deprivation has led to concerns that this might be contributing to higher rates of obesity in deprived areas. A study, carried out by the University of Cambridge and published in the British Medical Journal in 2014²⁶, found that increased exposure to fast food outlets is associated with increased fast food consumption and a marginally higher body mass index (BMI – a widely-used gauge of the extent to which someone is underweight or overweight).

Given this, particular areas of concern might be food deserts with above-average numbers of takeaway food outlets. Conceivably, in areas where access to supermarkets and convenience stores are limited, individuals might be more inclined to frequent takeaways on a regular basis.

However, our analysis suggests that food deserts (on our definition) also tend to be “takeaway deserts”, using a similar definition. Just 0.2% of middle layer super output areas in England & Wales²⁷ are food deserts with a high number of takeaways.

Figure 21: Number of supermarkets/convenience stores, and number of takeaway stores. Distribution of middle layer super output areas in England & Wales

		Number of supermarkets/convenience stores		
		Desert (2 or fewer stores)	Normal (3-7 stores)	Oasis (8+ stores)
Number of takeaway stores	Desert (2 or fewer stores)	13.2%	22.5%	1.7%
	Normal (3-7 stores)	4.8%	30.1%	9.7%
	Oasis (8+ stores)	0.2%	5.7%	12.2%

Source: IDBR data for 2017, SMF analysis

The ONS data show a small number of output areas that are both food deserts and “takeaway oases”, which we set out in the table below.

Figure 22: Food deserts with a high number of takeaways (“takeaway oases”), England & Wales

Super output area name	Description of super output area
Birmingham 112	Bourneville, Birmingham
Northumberland 028	High Pit, Cramlington, Northumberland
Stockton-on-Tees 016	East Hartburn, Hartburn Village, Stockton-on-Tees
Sunderland 002	Seaburn, Sunderland
Stockport 020	Rose Hill, Marple
Bradford 026	Eccleshill, Bradford
Leeds 044	East of Headingley, North of Burley Park train station, Leeds
Wakefield 005	Glasshoughton, Castleford, Yorkshire
Redbridge 005	Woodford Bridge, London Borough of Redbridge
Portsmouth 004	Port Solent, Portsmouth
Blaenau Gwent 002	Brynmawr, town in Wales

Source: IDBR data for 2017, SMF analysis

²⁶ <https://www.bmj.com/content/348/bmj.g1464>

²⁷ We restrict our analysis to England & Wales as super output areas are not directly comparable to the “Intermediate zone” level of geography used in Scotland.

Replicating this analysis for just *deprived* areas²⁸ shows a similar picture. Just 0.2% of deprived super out areas in England & Wales are both food deserts and takeaway oases. This suggests that, rather than takeaways “filling the void” in deprived areas lacking convenience stores and supermarkets, such areas lack other types of stores too, including takeaways.

We note that, on the whole, deprived super output areas are more likely to be “takeaway oases” – with such areas accounting for about three in ten (29.8% of) deprived areas in England & Wales. This compares with just 14.1% of non-deprived areas.

Figure 23: Number of supermarkets/convenience stores, and number of takeaway stores. Distribution of *deprived* middle layer super output areas in England & Wales

		Number of supermarkets/convenience stores		
		Desert (2 or fewer stores)	Normal (3-7 stores)	Oasis (8+ stores)
Number of takeaway stores	Desert (2 or fewer stores)	5.9%	15.5%	2.1%
	Normal (3-7 stores)	2.4%	27.2%	17.2%
	Oasis (8+ stores)	0.2%	7.1%	22.5%

Source: IDBR data for 2017, SMF analysis

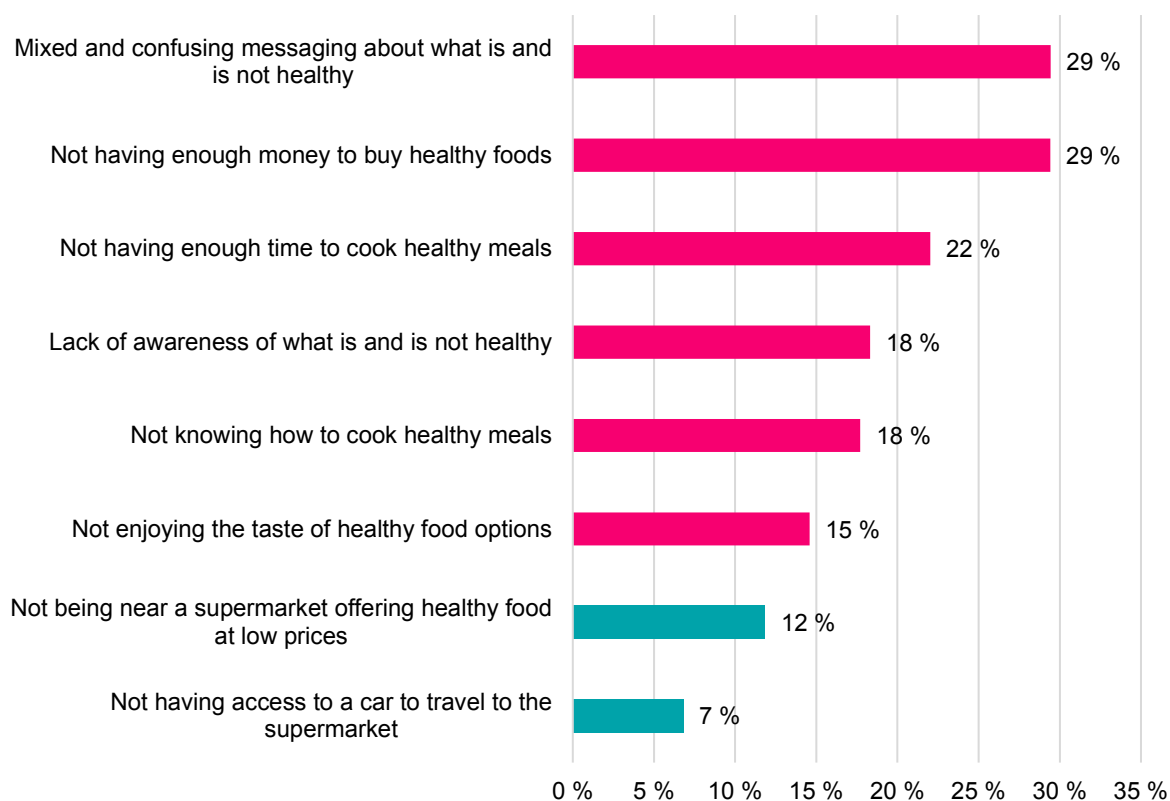
Does access to food stores impact diets, and who is most affected by this?

According to the Opinium survey commissioned as part of this research, one in eight (12% of) individuals stated that “not being near a supermarket offering healthy food at low prices” was a barrier to being able to eat more healthily. Some 7% said not having access to a car to travel to the supermarket was a barrier to eating healthily. Although less frequently cited than other barriers – for example, 29% cited mixed messaging about healthy eating – this suggests that access to food stores is a barrier to eating well in some parts of the UK for some individuals.

The proportion of survey respondents citing not being near the right kind of supermarket as a barrier to eating healthily was highest among those with the lowest incomes. Just under a fifth (18%) of those with a household income of £10,000 or less cited this as a barrier to eating healthily.

²⁸ As per our definition earlier

Figure 24: Which, if any, of the following do you think are the biggest barriers to being able to eat more healthily? Please select a maximum of three options.

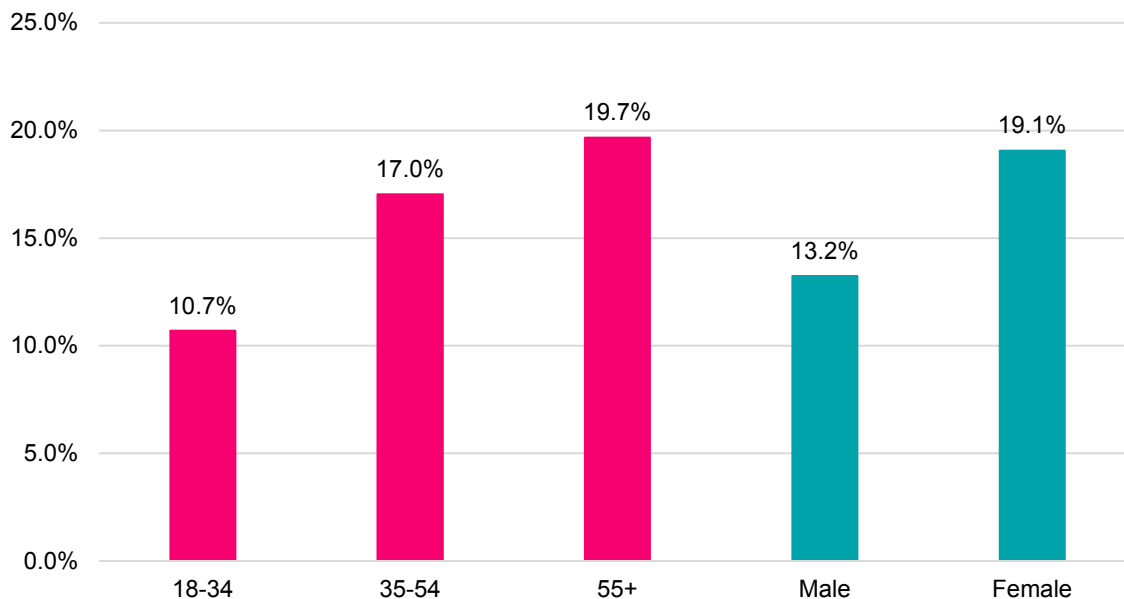


Source: *Opinium*

In total, 16% of survey respondents said either not having access to a car or not being near a supermarket offering healthy food at low prices was a barrier to eating healthy – that is, issues of *access* to food stores were a key concern. Segmented by age groups, we note that these are particularly barriers for older groups – a fifth (20%) of over 55s stated either of these issues as barriers to eating healthily, compare to just over one in 10 (11%) of 18-34 year olds. We also note that women are more likely than men to cite these factors as barriers to eating healthy – with 19% citing either of these compared with 13% of men. Those on the lowest incomes are more likely to cite lack of access to a car or not being near a healthy/affordable supermarket as a barrier to eating healthy - over a fifth (22%) of those with a household income of £10,000 or less cited these factors as an issue.

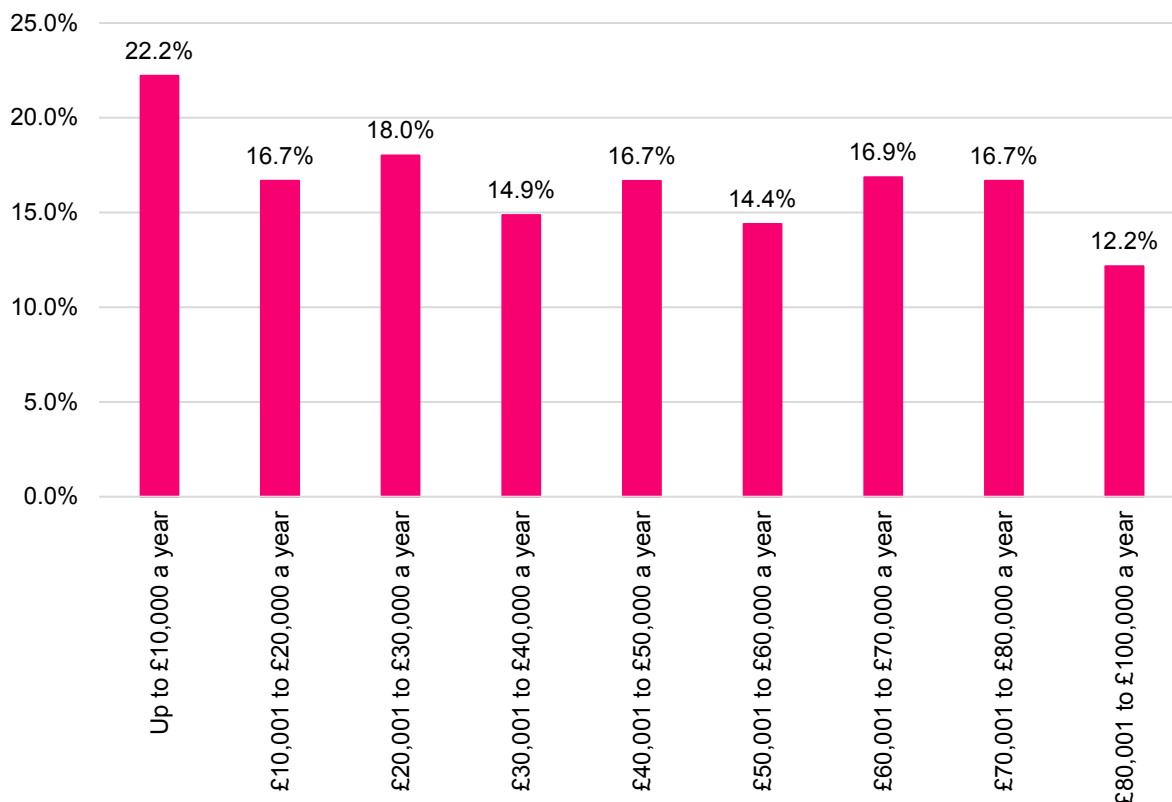
These survey findings, graphed overleaf, highlight the demographic groups that are most likely to be affected by difficulties accessing supermarkets offering healthy and affordable food – for example as a result of living in a food desert.

Figure 25: Proportion of survey respondents stating either 'not being near a supermarket offering healthy food at low prices' or 'not having access to a car to travel to the supermarket' as barriers to eating healthily, by age group and gender



Source: Opinium

Figure 26: Proportion of survey respondents stating either 'not being near a supermarket offering healthy food at low prices' or 'not having access to a car to travel to the supermarket' as barriers to eating healthily, by household income



Source: Opinium

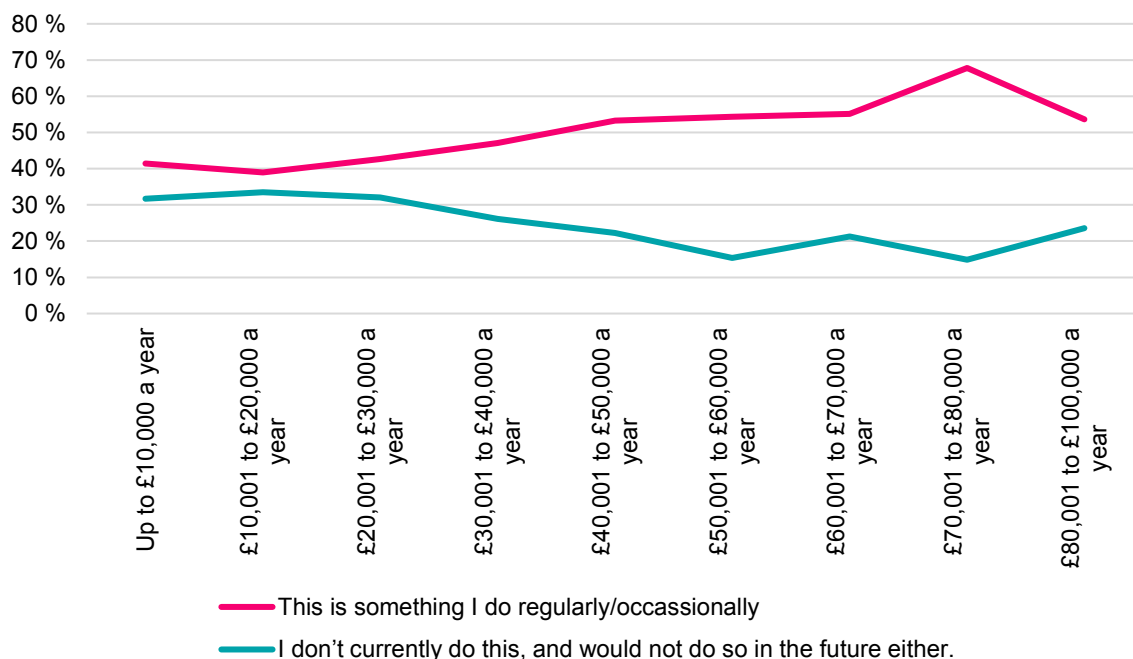
Research by academics at the London School of Economics found a link between living in a food desert and children being overweight in the United States²⁹ – particularly among children in urban areas. The research suggests that there may be a case for health policymakers focusing on children living in food deserts – with interventions such as physical activity programs and school-based nutrition to offset some of the dietary problems associated with living in a food desert.

Online shopping – the end of food deserts? Or the creation of more deserts?

Online grocery shopping has the potential to eliminate regional differences in food availability and food prices. However, we note some barriers to everyone benefiting from this. The first is digital exclusion: the fact that some households do not and cannot use the internet. This is particularly true among the elderly: ONS statistics for 2018 show that, while almost all under the age of 55 have used the internet over the past three months, this is only true for 44% of those aged 75 and over³⁰.

In the Opinium survey conducted as part of this study, households on higher incomes were more likely to currently use online grocery shopping, and those on lower incomes were more likely to say that online grocery shopping is something they would never use. Given this, the benefits of online shopping are unlikely to be felt equally across income groups. Given that the Opinium survey was an online poll, and digital exclusion is more prominent among low income households, this is likely to underestimate the actual divide in online shopping activity across income groups.

Figure 27: Do you buy, or would you consider buying, your groceries online and have them delivered to your home? Responses by household income group



Source: Opinium

²⁹<http://blogs.lse.ac.uk/usappblog/2015/08/20/living-in-an-urban-food-desert-is-a-risk-factor-for-weight-gain-during-childhood/>

³⁰<https://www.ons.gov.uk/businessindustryandtrade/itandinternetindustry/bulletins/internetusers/2018>

Furthermore, the rise of online grocery shopping could lead to the creation of more food deserts, if the shift to online leads to store closures. This could conceivably lead to worsening food affordability and availability for low income and vulnerable households – potentially with associated implications for diet and health.